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94. The method of claim 72, wherein the labeled nucleic acid is designed to allow detection of retinoblastoma.--

**REMARKS**

Entry of the foregoing, reexamination and reconsideration of the above-identified application are respectfully requested.

The claims have been rewritten to more clearly define Applicants' invention. The application claims are now directed to methods of staining target chromosomal DNA employing high complexity nucleic acid probes and having repetitive sequences either removed or blocked.

Support for these new claims may be found in the instant application and in the applications from which priority is claimed. For example, support may be found in the instant application at the very least at page 2, lines 2-19; page 19, line 25 - page 20, line 10; page 21, line 15 - page 22, line 15; page 24, lines 1-5; page 26, line 12 - page 27, line 13; page 28, line 11-12; page 29, lines 23-25; page 44, line 6 - page 45, line 24; and page 50, lines 5-23. Support may also be found in U.S. Application No. 627,707, from which priority is claimed, at the very least at page 13, line 2 - page 15, line 8; page 23, line 1 - page 26, line 21; Section IV; and Section V. No new matter has been added by these new claims.

The outstanding rejections, as they apply to the claims now of record, will now be addressed.

The title of the invention has been objected to as not being descriptive. The title has been amended according.

Applicants note the indication that a petition is necessary in view of the submission of color photographs for this application. A Petition Under 37 C.F.R. §1.183 to accept the color photographs will be prepared and filed upon indication that the application is in condition for allowance.

The specification has been objected to and claims 1-20 have been rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to enable the claimed invention. Claims 1-20 have also been rejected under 35 U.S.C. §112, first paragraph, as allegedly the specification only enables claims directed to retinoblastoma rearrangement detection as illustrated in Example IX of the specification. The objection/rejection and rejection are now moot in view of the deletion of claims 1-20 and addition of new claims 48-94.

Claims 1-20 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. This rejection has been overcome by the deletion of claims 1-20 in favor of new claims 48-94. The claims now of record recite positive method steps.

Claims 15-20 were rejected under 35 U.S.C. §112, fourth paragraph, as allegedly being of improper dependent form. This rejection is now moot in view of the instant amendment.

In view of the above, withdrawal of the above-identified rejections is respectfully requested and believed to be in order.

Now turning to the prior art rejections of record, claims 1-20 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Weissman et al. This rejection, as it applies to the claims now of record, is respectfully traversed.

Weissman describes the detection of chromosomal rearrangements, e.g., the spacing between genes including linkage that may be related to a disease. Weissman, however, fails to disclose or even suggest applicants' invention as now claimed. Weissman is unrelated to a method of staining targeted chromosomal material based upon nucleic acid segment employing high complexity nucleic acid probes of greater than 40 kb together with blocking nucleic acid and/or removal of repeats, in *in situ* hybridization, as claimed by applicants. Weissman is further unrelated to a method wherein the chromosomal DNA stained "is present in a morphologically identifiable chromosome or cell nucleus during the *in situ* hybridization," as recited in the claims. Nor does Weissman provide any motivation to stain targeted chromosomal material using such high complexity nucleic acid probes and blocking nucleic acid or removal of repeats in a method as claimed.

Withdrawal of this rejection is thus respectfully requested and believed to be in order.

The specification has been objected to for failing to recite complete citations for several references. By the instant amendment, the specification has been amended to recite the complete citations. Withdrawal of this objection is thus respectfully requested and believed to be in order.

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Further and favorable action in the form of a Notice of Allowance is respectfully requested.

In the event that there are any questions relating to this response, or to the application in general, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that prosecution of this application may be expedited.

Respectfully submitted,

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